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ABSTRACT

A longitudinal study examined the developmental spelling level of primary-age children. Eight subjects completed 10 separate cloze sentences in their kindergarten, first, and second grade. Subjects were read each of the sentences and then given time to write the word in the corresponding box. The test was introduced as a detective game to alleviate tension. Once data from each child were collected, the students' developmental stages were ascertained. Results indicated that spelling is indeed developmental. Findings suggest that invented spellings can provide classroom teachers with much needed information to help design appropriate instruction in writing and reading at each child's developmental level. (One figure listing the 10 sentences used in kindergarten, a table listing the 5 developmental spelling stages, and a table representing subjects' invented spellings are included.) (RS)

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An Action Model for Research in the Classroom: Developmental Spelling K - 2

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Much of spelling research since 1971 has been centered on what an individual child writes rather than investigating weekly tests. The term invented spelling might have been coined by Charles Read when he tried to explain children's natural attempts to write words the way they sound to children. The resulting phonetic spelling, matching a letter with its name rather than its sound, or, by place of articulation, is often difficult for the unpracticed eye to read. Invented spelling has been found to be systematic however, and is an important developmental step for beginning writers and readers (Gentry, 1983).

Classroom teachers and parents who encourage invented spelling are freeing up children's minds to concentrate on writing, on the message, rather than mechanics. This allows children to "think of themselves as writers." This may be a prelimiary step to writing just as memorizing repetitive text and "reading" a book allows beginning readers to experience success and think of themselves as readers. Reluctance on the part of many teachers, and even more parents, to accept invented spellings as developmental, could actually slow down or even stop the flow of ideas from beginning writers. Some critics of developmental spelling feel children may never progress to correct spelling. As Frank Smith so succinctly writes, "Children who spell 'by ear' are the worst

spellers; spelling is basically a matter of convention with the best clues always being provided by meaning" (1985, p. 151). Research in invented spelling supports Smith's statement by showing that English spelling has three distinct levels: letter-name strategy, within word pattern, and meaning (Henderson, 1990). To writers for whom spelling is difficult, the second and third levels of spelling must be taught. Troubled spellers will not internalize the clues these last two levels provide for spelling without being shown how to use cognitive strategies until the spellings become automatic.

The purpose of this article is twofold. First, to share preliminary results of data collected from Kindergarteners, first, and second graders from the first three years of a projected four-year longitudinal study being conducted with K-6 grade students in developmental spelling, and second, to show classroom teachers how they can collect and use information from developmental spelling stages themselves to better their instruction in writing and reading.

Background Research

Glenda Bissex (1984) tells us to delight in children's discovery of written languge much the same as parents enjoy their child's first attempts at speech. It was Read's dissertation (1971) on children's

systematic use of vowel substitutions that led up to Bissex's work, GYNS AT WRK (1980). These two efforts triggered many of the first studies into invented spelling. The work of Charles Read (1971) with preschoolers and James Beers and Edmund Henderson (1977) with first graders predated J. Richard Gentry's (1982) developmental stages of spelling. Gentry divided spelling into five stages based on common characteristics found in children's writing attempts.

Stage I (precommunicative) spellers understand that writing involves marks on paper but they have not yet separated letters from numbers, symbols, and drawings. Directionality is also questionable. Stage II (semi-phonetic) spellers are beginning to internalize the alphabetic nature of English and generally use initial consonants correctly, and sometimes other easily "heard" consonants or long vowels. They also use abbreviated one-, two-, or three-letter configurations for words (K = cake, FB = football, ShB = shoebox). Stage III (phonetic) spellers tend to represent most or all the sounds in a word, including vowels but, they may not use the same letter(s) correct spellers would use. With a little practice, spelling/writing at this stage can be easily deciphered. Stage IV (transitional) spellers have read (and wrote) enough to know words are not always spelled the way they sound. They use visual

memory and commonly occurring patterns in English spelling (ed for past tense markers rather than t, d, or "ted"; VCe). They have started to internalize the concept of spelling at different levels. Stage V (mature) spellers have developed a spelling consciousness -- they know when a word they use is correct or not (Henderson, 1990) but, they do not necessarily spell correctly 100 percent of the time.

The first level of spelling is predominately a letter name strategy. This works well for children in Stages II and III. As children read more and more text, they begin to notice words in print that are not spelled the way they write them. This is the beginning of a transition from sole reliance on phonics to visual memory for frequently occurring patterns in English. Final e markers appear in their writing along with vowel diagraphs such as "ea" or "ee". Following this second level of spelling (visual memory) is an awareness of the importance of meaning to English spelling. Derivatives are spelled similarly. Homonyms in compound words become regularized. Mailman is not spelled male but, mail because of its relationship to mail. Morphology or meaning is the basis for correct letter combinations in this third level of spelling.

Stage IV spellers take the second level of spelling knowledge as well as phonics into consideration when spelling words. Towards the end

of Stage IV, students begin to utilize the third level of spelling, morphology or meaning. Meaning is often a better indicator of spelling than sound. For instance, nature and natural seem like two different words to a Stage III speller working solely on a sound/symbol correspondence level. A mature speller knows that natural is related to nature in meaning and therefore their spelling is similar even though the vowel sound changes. Stage V (correct) spellers occasionally may misspell a word but, for the most part, they have mastered English spelling. They have also developed a spelling consciousness, an awareness of when a word just doesn't seem right. They also know how to use a dictionary for spelling -- something spellers quagmired in Stage III can not do independentally.

In order to obtain an understanding of his students' prior knowledge of words, Richgels (1986) devised a ten sentence oral cloze activity using Fisher Price magnetic letters. This technique was adapted to a paper and pencil format in order to better differentiate between Stage I and Stage II spellers. Using magnetic letters automatically places all students into Stage II since they have no opportunity to intermix numbers and symbols with letters or concurrently use upper and lower case letters.

Description of the Study

To test each child's developmental spelling level, ten separate cloze sentences were used each year (see Figure 1 for the cloze sentences used in 1991-92). Each of these cloze sentences had a blank near the end. This format gave the children more clues to get the "right answer," the word expected. The expected word was not always forthcoming so the child's answer was accepted and then he was asked to write it down. It is possible to analyze spelling strategies with whatever word is written.

- insert Figure 1 here -

The test was introduced as a detective game to alleviate any tension the child may have been feeling. The child would be told: "In this game I'm going to read you a sentence, but because I'm a tricky lady, I'm going to leave one of the words out. It's your job to be Detective Shirley (the child's first name) and try to figure out what word is missing. Then you can try to write it in these boxes." This not only puts the child at ease but, also makes her feel that she is important and that what she is doing is important. After the introduction, the first sentence was read, time for an oral response was given and then the child was asked to try to write the word in the corresponding box. This was done for all 10 sentences. The child was then asked to read the words back orally. If a

child could not read what he had written, clues were given. If more help was needed, the letter names were elicited. Once data from each child in a classroom was collected, the students' developmental stages were ascertained by consulting a chart combining the characteristics of Gentry's (1982) and Henderson's (1990 stages (See Table 1.) Confirmation for Gentry's five stages of spelling was found. Spelling is developmental. You can visually see the developmental nature of spelling. Trying to quantify this information is more problematic. (See Table 2.)

- Insert Table 2 here -

Many questions remain to be answered. By looking at Susan's and Darien's data samples, you will correctly predict that those children who are advanced in spelling/writing in Kindergarten are going to be in the top third of their class in second grade. Both of these children were strong Stage II spellers/writers during the first half of Kindergarten. The opposite is not necessaily true of the less advanced students always staying near the bottom of the class, at least with this sample of eight children. Shirley who was preStage I, and Star and Oren who were Stage I in Kindergarten, have developed into strong Stage IV, late Stage III-early Stage IV, and Stage III spellers, respectively by second grade.

Star and Oren both used a form of the same strategy as

Kindergarteners. They knew the letters in their names and used these letters to "write" words. Star used a different letter of her name to represent each word, Oren used all the letters in his first name ordered differently for each word. Both of these children used a strategy, were thinking, and progressed even more during first and second grade.

Johnny seems to have had a lot of information in his head at the time testing in Kindergarten was done. He did not yet know how to organize all of this information, although he had the concept of left to right mastered. It is easy to see the characteristics of a Stage I speller in Johnny's Kindergarten paper: he intermixes upper and lower case letters and numbers. During the first semester of first grade, Johnny was using a Stage II strategy of initial consonants to represent words. Sometime, somehow, between the second semester of first grade and October of second grade, Johnny made sense out of English spelling and is now on his way to becoming a successful writer. He is now using strategies representative of a low Stage IV speller.

Shirley could only write her name early in Kindergarten. She knew little else about writing letters and words at this point in her development. Wanting to respond in some way, however, Shirley used scribbles to represent each word. She did so in a left to right progression.

Based on Gentry's five stages of spelling, Shirley is PreStage I at this point. So was Adam. His paper is full of scribbles. He does not have directionality or spatial orientation established yet. His name was also written from right to left.

In first grade, Adam was at an early Stage I: he made a "p" for pie in number three, then made ramdom letters for numbers 1, 4, 5, 6, 7, 8, and 10. The letter "m" in numbers 1, 4, and 5 is in Adam's name. He may have been using a "letters in his name" strategy here. This strategy is often seen in Kindergarteners' writing as demonstrated by Star and Oren. Remember Adam is in first grade at this point. He did not attempt writing anything for numbers 2 and 9.

Adam has not mastered the concept of writing yet in the beginning of second grade. He is still in Stage I. Notice he attempted number one where socks was the anticipated answer. He has the initial consonant correct but, is this chance? Look at the strategy he uses for the other nine words: t, m, e, r , s, o, are all letters is his real name. (Names have been changed.) After two full years in school, Adam is developmentally where Star and Oren were at the beginning of Kindergarten, and considerably behind Susan and Darien. He is not experiencing success as a writer.

Butch is another student for whom spelling/writing has remained troublesome. His strategy early in Kindergarten was to use numbers to fill in each box. In prefirst he knew seven of nine initial consonants and the long vowel sound "a". Notice he still used a numeral for six and drew a picture of nose rather than attempt the written words. This placed Butch at Stage I. During the beginning of first grade, Butch's third year in school, he is still spelling/writing at a Stage I level, albeit higher than the year before but, considerably lower than the other children. Using a scoring system of one point for Stage I spellings, two points for Stage II spellings, ... five points for Stage V spellings, Butch still totals 17, the same score he had in prefirst. In order to show numerically the progress you can see visually that Butch has made from year two to year three of the study, Gentry's five developmental stages need to be further subdivided into low, middle, and high Stages I, II, III, and IV. By visually comparing Butch's data samples from prefirst and first grades, you can see he is making progress, spelling is developmental but, we need to become aware of teaching/learning strategies to nudge those children who need it from one stage to the next. Classroom teachers can use a "spelling" test to help them understand each child's developmental writing stage. This knowledge can be used for planning instruction in small

groups or one on one during the writing process. Letter names, matching upper and lower case letters, and commonly occurring letter sequences should be pointed out during shared reading. Formal instruction in spelling should be put off until Stage IV; knowledge of letter names should be mastered before first grade. Become aware of your students' developmental spelling stages by giving the ten cloze sentences and asking each child individually to respond in writing. Look at the results -- you should be able to group your class for instruction based upon letter knowledge into Stages I, II, III, or IV. Most Kindergarteners will be in Stages I or II; first graders in Stages II or III with some in I or IV; and second graders in III or IV with some in II or V, and perhaps I if you have a child like Butch who has not mastered the code yet.

Invented spellings can provide classroom teachers much needed information to help design appropriate instruction at children's developmental levels. As primary teachers, we need to know how to interpret children's attempts at writing and praise or nudge them along appropriately so they can experience success wherever they are in the developmental process and build upon their knowledge of letters and words.

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Figure 1

1. When you get dressed for school in the morning, on your feet you put shoes and _____. (socks)

2. My niece's favorite character on Sesame Stree is Cookie _____. (monster)

3. There are many rooms in my house. The shower is in the bathroom. The TV is in the family rom. The refrigerator is in the _____. (kitchen)

4. Mom is a woman. Dad is a man. Joey is a boy. Susie is a _____. (girl)

5. I usually use a brush to fix my hair. What else could I use? (comb)

6. If I come home after dark, in order to see, I must turn on the _____. (light[s])

7. If the door is not open, then it is _____. (closed)

8. Some boys like to play a game where they wear shoulder pads and helmets, pass and catch, run for touchdowns. What game are they playing? (football)

9. An elephant has a trunk. You and I have a nose. A bird has a _____. (beak)

10. A long time ago farmers used horses to pull a wagon or plow their fields. Today farmers drive a _____. (tractor)

Caption: Cloze sentences used to obtain data samples in 1991-92.

Words for 1989-90:	Words for 1990-91:
1. fly	1. sky
2. table	2. apple
3. tie	3. pie
4. deep	4. feet
5. jet	5. bus
6. six	6. box
7. kittens	7. mittens
8. cake	8. kite
9. bird	9. car
10. hose	10. nose

Table 1

(Precommunication) Stage I
Upper and lower case letters, numbers and symbols intermixed.
Spatial orientation and directionality may be unestablished.

(Semiphonetic) Stage II
Sound/letter correspondence, especially initial consonants established.
Abbreviated one-, two-, or three- letter spellings.

(Phonetic) Stage III
Vowel in every syllable (may be haphazard yet).
Final e marker generally correct.
Systematic and readable spellings.

(Transition) Stage IV
Moves from phonological only strategy to reliance on visual memory and meaning.
Vowel before r usually.
Short vowels spelled correctly.
Inflected ed is correctly spelled.

(Mature [Correct]) Stage V
Has developed a word consciousness.
Can use a dictionary for spelling.
Generally spells correctly.

Caption: Characteristics of Five Developmental Spelling Stages

Table 2

	First Column =		Kindergarten - 1989-90	Second =
Column lst grade	- 1990-91			
	Third Column	=	2nd grade - 1991-92	
	First Row	=	Susan	(female)
	Second Row	=	Darien	(male)
	Third Row	=	Star	(female)
	Fourth Row	=	Oren	(male)
	Fifth Row	=	Johnny	(male)
	Sixth Row	=	Shirley	(female)
	Seventh Row	=	Adam	(male)
	Eighth Row	=	Butch	(male)

REOF OI	Nat

C	6
AE	E
K	K
V	B
KB	d

Soocks	fas lat
Monstr	clost
Kichin	foot ball
Garlle	beck
kome	tracdrs

gay	six
appala	bulin
Pei	Coek
Feeb	Brd
But	naeos

Sooks	bite
Mister	Closed
Kicdin	Foot ball
grit	boke
Come	tratr

m	p
	s
o	l
m	o

1	r
3	v
0	b
2	8
	6

C	6
A	K
P	K
F	B
B	0

5	L
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Sky	Six
all	Kettys
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Feet	Bird
Bus	Nos

Scors	List
Moctey	Class
Kicia	Football
gril	beck
Come	trater

EL	hsB
~~FL~~ TBL	MT
HT	KT
DB	KR
LT	HS

si.	SiK
APPL	Kitis
KAK	KAK
FEft	BRD
BAS	NOS

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g	o
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r	g
O	M
n	n

CEO	SAS
A-L	KAS
FEA	KAK
Fet	BRD
BIS	Nos

Sooks	flaslict
Misares	Coesd
Kissen	football
girl	bick
comb	traed

LINT	INTIT
NITT	TINNT
TINT	NTTI
TNLJ	NTIL
WATIT	NTII

Sic	S
AN	CN
PA	CN
Fxi	BN
BN	N

Sas	lat
Mashter	Klast
Kacham	Fat Ball
gal	Ber
Kom	chacd